07/16/2018 | By: Ajit K Prasad



Big Data Engineering with Hadoop & Spark

Assignment on Sqoop





# Session 6: Assignment 6.1

This assignment is aimed at consolidating the concepts that was learnt during the Data Indigestion Tool Sqoop session of the course.

### Problem Statement

### Task 1:

 Use Sqoop tool to export data present in SQOOPOUT folder made while demo of Import table.

#### Solution:

- Login to the "mysql" shell using the command \$ mysql -u root -p
- Check databases available using the command mysql> show databases;
- From the list of the databases select "simplidb" database using the command mysql> use simplidb;

```
[acadgild@localhost ~]$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.3-rc-log MySQL Community Server (GPL)
Copyright (c) 2000, 2017, Oracle and/or its affiliates. All rights reserved.
Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql> show databases;
Database
 information_schema
  metastore
  mysql
  oozie
  performance_schema
  simplidb
 sys
7 rows in set (0.04 sec)
mysql> use simplidb
Reading table information for completion of table and column names
You can turn off this feature to get a guicker startup with -A
Database changed
```

Check the tables available under "simplidb" database

Create a table "Person1" to which data present in output folder needs to be exported to, use the command below mysql> create table Person1(person\_id INT NOT NULL, lname varchar(20), fname varchar(20), area varchar(20), city varchar(20), PRIMARY KEY (person\_id));

```
mysql> Create table Person1(
    -> person_id INT NOT NULL,
    -> lname varchar(20),
    -> fname varchar(20),
    -> area varchar(20),
    -> city varchar(20),
    -> PRIMARY KEY (person id)
    -> ):
Query OK, 0 rows affected (0.04 sec)
mysql> show tables;
| Tables in simplidb
 Person
 Person1
 employee
3 rows in set (0.00 sec)
mysql> desc Personl;
| Field
                           | Null | Key | Default | Extra
              Type
  person id
                                    PRI
              int(11)
                             NO
                                          NULL
              varchar(20)
  lname
                             YES
                                           NULL
              varchar(20)
  fname
                             YES
                                          NULL
              varchar(20)
                             YES
                                          NULL
  агеа
                                          NULL
              varchar(20)
                            YES
 city
5 rows in set (0.01 sec)
mysql>
```

Execute the command to export data from output folder "sqoopoutbyid" to new table "Person1"

\$ sqoop export --connect jdbc:mysql://localhost/simplidb --table **Person1** --username root --password Root@123 --export-dir /**sqoopoutbyid**/ -m 1 --input-fields-terminated-by ',' --columns person\_id,lname,fname,area,city

```
[acadgild@localhost -]$
[acadgild@localhost -]$ sqoop export --connect jdbc:mysql://localhost/simplidb --table Person1 --username root --password Root@l23 --export-dir /sqoopputbyid/ -m 1 --input-fields-terminated-by ',' --columns person id, Iname, frame, rare, city warring; /home/acadgild/install/sqoop/sqoop-i.4.6.bin_hadoop-2.0.4-alpha/../accumulo goes not exist! Hcatalog jobs will fail. Please set sHCAT HOME to the root of your Hcatalog installation.

Please set SHCAT HOME to the root of your Accumulo installation.

Please set SHCAT HOME to the root of your Accumulo installation.

18/07/16 11:43:17 NARN tool.BaseSqoop Running Sqoop version: 1.4.6

18/07/16 11:43:17 NARN tool.BaseSqoop Running Sqoop version: 1.4.6

18/07/16 11:43:19 INFO onalager.MySQLManager: Preparing to use a MySQL streaming resultset.

18/07/16 11:43:19 INFO onalager.MySQLManager: Preparing to use a MySQL streaming resultset.

18/07/16 11:43:19 INFO onalager.MySQLManager: Preparing to use a MySQL streaming resultset.

18/07/16 11:43:19 INFO onalager.MySQLManager: Preparing to use a MySQL streaming resultset.

18/07/16 11:43:19 INFO onalager.MySQLManager: Evecution without server's identity verification is not recommended. According to MySQL 5.5.6.26+ and 5.7.6+ requirements SSL connection without server's identity verification is not recommended. According to MySQL 5.5.8+5.5.6.26+ and 5.7.6+ requirements SSL connection must be established by default if explicit option isn't set. For compliance with existing applications not using SSL the verifyserverCertificate property is set to 'false'. You need either to explicatly disable SSL by setting paptications not using SSL tendent: SELECT t.- FROM Person1 AS t LIMIT 1

18/07/16 11:43:28 INFO manager.SqLManager: Executing SQL statement: SELECT t.- FROM Person1 AS t LIMIT 1

18/07/16 11:43:28 INFO manager.SqLManager: Executing SQL statement: SELECT t.- FROM Person1 AS t LIMIT 1

18/07/16 11:43:28 INFO manager.SqLManager: Executing SQL statement: SELECT t.- FROM Person1 AS t LIMIT 1

18/07/16 11:4
```

```
18/07/16 11:44:00 INFO Configuration.deprecation: mapred.map.tasks is deprecated. Instead, use mapreduce.job.maps
18/07/16 11:44:10 INFO client.RMProxy: Connecting to ResourceManager at localhost/127.0.0.1:8032
18/07/16 11:44:12 INFO input.FileInputFormat: Total input paths to process : 2
18/07/16 11:44:12 INFO input.FileInputFormat: Total input paths to process : 2
18/07/16 11:44:13 INFO mapreduce.JobSubmitter: number of splits:1
18/07/16 11:44:13 INFO mapreduce.JobSubmitter: number of splits:1
18/07/16 11:44:13 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1531718966036_0001
18/07/16 11:44:15 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1531718966036_0001
18/07/16 11:44:22 INFO mapreduce.Job: The uri to track the job: http://localhost:nebs88/proxy/application_1531718966036_0001
18/07/16 11:44:22 INFO mapreduce.Job: The uri to track the job: http://localhost:nebs88/proxy/application_1531718966036_0001
18/07/16 11:45:46 INFO mapreduce.Job: Job job job_1531718966036_0001
18/07/16 11:46:40 INFO mapreduce.Job: map 10% reduce 0%
18/07/16 11:46:40 INFO mapreduce.Job: map 10% reduce 0%
18/07/16 11:46:43 INFO mapreduce.Job: counters:

File: Number of bytes written=127548

File: Number of bytes read=0
File: Number of bytes read=0
File: Number of bytes read-0
File: Number of bytes read-0
File: Number of bytes read-0
HDFS: Number of bytes written=0
HDFS: Number of pytes written=0
HDFS: Number of
```

```
FILE: Number of bytes read=0
FILE: Number of read operations=0
FILE: Number of read operations=0
FILE: Number of read operations=0
FILE: Number of write operations=0
HDFS: Number of bytes read=609
HDFS: Number of bytes vritten=0
HDFS: Number of read operations=0
JDFS: Number of vrite operations=0
J
```

Finally, to check if the data is exported in the *Person1* table, use the command below
 mvsql> select \* from Person1;

```
mysql>
mysql> select * from
                       Person1;
  person_id | lname | fname |
                               area
                                            city
                                Whitefield |
Whitefield |
                                              Bangalore
          1
              Rizvi
                       Syed
          2
              Rizvi
                       Syed
                                              Bangalore
                                Whitefield
          3
                       Syed
              Rizvi
                                              Bangalore
                                Whitefield
          4
              Rizvi
                       Syed
                                              Bangalore
          5
                                Whitefield
                                              Bangalore
              Rizvi
                       Syed
                                Whitefield
          6
                                              Bangalore
              Rizvi
                       Syed
                                Whitefield
          7
              Rizvi
                       Syed
                                              Bangalore
                                Whitefield
          8
              Rizvi
                       Syed
                                              Bangalore
                                Whitefield
          9
              Rizvi
                       Syed
                                              Bangalore
         10
              Rizvi
                                Whitefield
                       Syed
                                              Bangalore
         11
              Rizvi
                       Syed
                                Whitefield
                                              Bangalore
         12 | Rizvi |
                       Syed
                                Whitefield |
                                              Bangalore
12 rows in set (0.00 sec)
mysql>
```

## Task 2:

 Use Sqoop tool to export data present in SQOOPOUT folder made while demo of Import table with parameter person\_id =3.

#### Solution:

Import data with parameter "person\_id=3", use the command below \$ sqoop import --connect jdbc:mysql://localhost/simplidb --table Person -- username root --password Root@123 --target-dir /sqoopoutbyPersonID -m 1 --where person\_id=3

```
[acadgild@localhost -]$
[acadgild@localhost -]$ agoop import --connect jdbc:mysql://localhost/simplidb --table Person --username root --password Root@123 --
target-dir /sqoopoutbyPersonID ·m 1 --where person id=3
Warning: /home/acadgild/install/sqoop/sqoop-1.4.6.bin hadoop-2.0.4-alpha/../hcatalog does not exist! HCatalog jobs will fail.
Please set $HCAT HOME to the root of your HCatalog installation.
Warning: /home/acadgild/install/sqoop/sqoop-1.4.6.bin hadoop-2.0.4-alpha/../accumulo does not exist! Accumulo imports will fail.
Please set $ACCUMULO HOME to the root of your Accumulo installation.
18/07/16 13:40:11 INFO spoop Sqoop; Running Sqoop version: 1.4.6
18/07/16 13:40:11 INFO spoop Sqoop; Running Sqoop version: 1.4.6
18/07/16 13:40:11 INFO manager. MySQLManager: Proparing to use a MySQL streaming resultset.
18/07/16 13:40:11 INFO manager. MySQLManager: Proparing to use a MySQL streaming resultset.
18/07/16 13:40:11 INFO stable Mark: Establishing SSL connection without server's identity verification is not recommended. According to MySQL 5.5.45.7. 5.6.264 and 5.7.64* requirements SSL connection without server's identity verification is not recommended. According to MySQL 5.5.454, 5.6.264 and 5.7.64* requirements SSL connection must be established by default if explicit option isn't set. For compliance with existing applications not using SSL the verifyServerCertificate property is set to 'false'. You need either to explicitly disable SSL by setting useSSL=false, or set useSSL=true and provide truststore for server certificate verification.
18/07/16 13:40:21 INFO manager. SqlManager: Executing SQL statement: SELECT t.* FROM 'Person' AS t LIMIT 1
18/07/16 13:40:21 INFO omanager. SqlManager: Executing SQL statement: SELECT t.* FROM 'Person' AS t LIMIT 1
18/07/16 13:40:21 INFO omanager. MySQLManager: HAUDOM MAPRED HOME is /home/acadgild/compile/rezd491fdcec7f8fd9bea0lead407de8/Person.jar
18/07/16 13:40:21 INFO omanager. MySQLManager: This transfer can be faster! Use the --direct
18/07/16 13:40:22 INFO omanager.
```

```
Mon Jul 16 13:49:37 INFO client.RMProxy: Connecting to ResourceManager at localhost/127.0.0.1:8032

Mon Jul 16 13:49:44 IST 2018 WARM: Establishing SSL connection without server's identity verification is not recommended. According to MySQL 5.3.45+, 5.0.26+ and 5.7.6+ requirements SSL connection must be established by default if explicit option isn't set. For city disable SSL by setting useSSL effect, and set of "faise". You need either to explicate the stablished by the set of "faise". You need either to explicate the stablished by the set of "faise". You need either to explicate the stablished by the set of "faise". You need either to explicate the stablished by the set of "faise". You need either to explicate the stablished by the set of "faise". You need either to explicate the stablished by the set of "faise". You need either to explicate the stablished by the set of set of
```

```
FILE: Number of bytes read=0
FILE: Number of bytes written=128025
FILE: Number of read operations=0
FILE: Number of read operations=0
FILE: Number of virte operations=0
HILE: Number of virte operations=0
HIDE: Number of bytes written=34
HIDES: Number of bytes written=34
HIDES: Number of read operations=0
HIDES: Number of large read operations=0
HIDES: Number of large read operations=0
HIDES: Number of virte operations=2
Job Counters

Launched map tasks=1
Other local map tasks=1
Other local map tasks=1
Total time spent by all maps in occupied slots (ms)=22579
Total time spent by all reduces in occupied slots (ms)=0
Total time spent by all map tasks (ms)=22579
Total time spent by all map tasks (ms)=22579
Total wore-mulliseconds taken by all map tasks=23120896
Map-Reduce Framework
Map input records=1
Map output records=1
Map output records=1
Input split bytes=87
Spiled Records=0
Failed Shuffles=0
Merged Map outputs=0
Go time elapsed (ms)=276
CPU time spent (ms)=5106
Physical memory (bytes) snapshot=2063437824
Total committed heap usage (bytes)=62980096
File Input Format Counters
Bytes Read=0
File Output Format Counters
Bytes Written=34
18/07/16 13:50:48 INFO mapreduce. ImportJobBase: Transferred 34 bytes in 71.7976 seconds (0.4736 bytes/sec)
18/07/16 13:50:48 INFO mapreduce. ImportJobBase: Retrieved 1 records.
Vou have new mail in /Var/spool/mail/acadgild
[acadgildelocalhost ~]$
```

 Create a new table "PersonExportByID" to which data present in output folder "sqoopoutbyPersonID" needs to be exported to, use the command below

mysql> create table PersonExportByID(person\_id INT NOT NULL, lname varchar(20), fname varchar(20), area varchar(20), city varchar(20), PRIMARY KEY (person\_id));

```
mysql> Create table PersonExportByID(
   -> person_id INT NOT NULL,
   -> lname varchar(20),
   -> fname varchar(20),
   -> area varchar(20),
   -> city varchar(20),
   -> PRIMARY KEY (person id)
    -> );
Query OK, 0 rows affected (0.03 sec)
mysql> show tables;
 Tables_in_simplidb
 Person
 Personl
 PersonExportByID
 employee
4 rows in set (0.00 sec)
```

 Execute the command to export data from output folder "sqoopoutbyPersonId" to new table "PersonExportByID", use the command below

\$ sqoop export --connect jdbc:mysql://localhost/simplidb --table **PersonExportByID** --username root --password Root@123 --export-dir /sqoopoutbyPersonID/ -m 1

```
[acadgild@localhost ~]$
[acadgild@localhost ~]$ sqoop export --connect jdbc:mysql://localhost/simplidb --table PersonExportByID --username root --password Root@l23 --export-dir /sqoopoutbyPersonID/ -m 1
Marning: /home/acadgild/install/sqoop/sqoop-1.4.6.bin_hadoop-2.0.4-alpha/../hcatalog does not exist! HCatalog jobs will fail.
Please set SHCAT HOME to the root of your HCatalog installation.
Marning: /home/acadgild/install/sqoop/sqoop-1.4.6.bin_hadoop-2.0.4-alpha/../accumulo does not exist! Accumulo imports will fail.
Please set SHCAT HOME to the root of your Accumulo installation.
18/07/16 14:00:01 IMFO sqoop.Sqoop. Running Sqoop version: 1.4.6
18/07/16 14:00:01 IMFO sqoop.Sqoop. Running Sqoop version: 1.4.6
18/07/16 14:00:02 IMFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.
18/07/16 14:00:02 IMFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.
18/07/16 14:00:02 IMFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.
18/07/16 14:00:02 IMFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.
18/07/16 14:00:02 IMFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.
18/07/16 14:00:03 IMFO manager.SqlManager: Executing SQL statement: State trustatore for server certificate verificate verification.
18/07/16 14:00:03 IMFO manager.SqlManager: Executing SQL statement: State trustatore for server certificate verification.
18/07/16 14:00:03 IMFO manager.SqlManager: Executing SQL statement: State trustatore for server certificate verification.
18/07/16 14:00:03 IMFO manager.SqlManager: Executing SQL statement: State trustatore for server certificate verificate verification.
18/07/16 14:00:03 IMFO manager.SqlManager: Executing SQL statement: State trustatore for server certificate verification.
18/07/16 14:00:03 IMFO manager.SqlManager: Executing SQL statement: State trustatore for server certificate verification.
18/07/16 14:00:03 IMFO manager.Mysqlmager: Executing SQL statement: State trustatory.
18/07/16 14:00:03 IMFO manager.My
```

```
18/07/16 14:00:24 INFO Configuration.deprecation: mapred.map.tasks is deprecated. Instead, use mapreduce.job.maps
18/07/16 14:00:25 INFO client.RMProxy: Connecting to ResourceManager at localhost/127.0.0.1:8032
18/07/16 14:00:31 INFO input.FileInputFormat: Total input paths to process: 1
18/07/16 14:00:31 INFO input.FileInputFormat: Total input paths to process: 1
18/07/16 14:00:32 INFO mapreduce.JobSubmitter: number of splits:1
18/07/16 14:00:32 INFO mapreduce.JobSubmitter: number of splits:1
18/07/16 14:00:33 INFO mapreduce.JobSubmitter: Submitting tokens for job: job. 1531718966036 0005
18/07/16 14:00:35 INFO impl.YarnClientImpl: Submitted application application 1531718966036 0005
18/07/16 14:00:35 INFO mapreduce.Job: The url to track the job: http://localhost:8088/proxy/application_1531718966036_0005/
18/07/16 14:00:35 INFO mapreduce.Job: Job job 1531718966036_0005 running in uber mode : false
18/07/16 14:00:35 INFO mapreduce.Job: Job job 1531718966036_0005 running in uber mode : false
18/07/16 14:00:35 INFO mapreduce.Job: Job job 1531718966036_0005 running in uber mode : false
18/07/16 14:01:03 INFO mapreduce.Job: map 0% reduce 0%
18/07/16 14:01:38 INFO mapreduce.Job: map 10% reduce 0%
18/07/16 14:01:38 INFO mapreduce.Job: map 10% reduce 0%
18/07/16 14:01:38 INFO mapreduce.Job: counters: 30

File: Number of bytes read=0
FILE: Number of bytes applications=0
HOPS: Number of large read operations=0
HOPS: Number of large read operations=0
HOPS: Number of read operations=0
HOPS: Number of read operations=0
HOPS: Number of read operations=0
Job Counters
Launched map tasks=1
Oat-local map tasks=1
Oat-local map tasks=1
Oat-local map tasks=1
Total time spent by all map tasks (ms)=25294
Total time spent by all map tasks (ms)
```

```
FILE: Number of bytes vritten=127581
FILE: Number of bytes vritten=127581
FILE: Number of read operations=0
FILE: Number of large read operations=0
FILE: Number of bytes read=171
HDFS: Number of bytes read=171
HDFS: Number of bytes read=171
HDFS: Number of bytes vritten=0
HDFS: Number of read operations=0
HDFS: Number of large read operations=0
HDFS: Number of vrite operations=0
JDFS: Number of vri
```

Finally, to check if the data is exported in the "PersonExportByID" table, use the command below mysql> select \* from PersonExportByID;